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EXAMINER

WANG-HURST, KATHY W

ART UNIT	PAPER NUMBER
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2617

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12/08/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/593,306	Applicant(s) SUNDBERG ET AL.	
	Examiner KATHY WANG-HURST	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on 10/29/2009 has been entered. Claim 27 has been amended. Claims 27-47 are still pending in this application.

Response to Arguments

1. Applicant's arguments filed 10/29/2009 have been fully considered but they are not persuasive.

Regarding the applicant's argument the prior art of record Japenga is contrary to applicant's claim limitation of both the first and second parameter being reported simultaneously and accordingly is even more deficient in failing to report the first parameter and the second parameter in the same field in a measurement report message (see Remarks pages 9-10), the examiner respectfully disagrees. The essence of the applicant's application is that the decision of a handover is based on two parameters as opposed to one parameter because each of the two parameters addresses a specific characteristic of a cell condition and using two parameters increases the likelihood of a successful handover. Japenga captures the exact essence by discussing the use of two parameters to achieve a successful handover. Specifically, Japenga discusses measuring a first parameter, Ec/No, to weed out the cells that do not meet the threshold and measuring a second parameter CPICH RSCP to finally select the cell that has the best quality (see [0007][0008][0028][0029]). As far as how the two parameters are transmitted is concerned, it is a design choice between two parameters being reported one after another and parameters being reported at the

Art Unit: 2617

same time. As a matter of fact, parameters can be transmitted either way. Monogioudis is brought in to show that it is indeed common in the art that two parameters may be reported at the same time. If the two parameters are reported the same time it is not difficult to infer that the parameters are placed in the same data frame. Chen is brought in to show that it is indeed well known in the art that several parameters may be placed in the same field for transmission. Therefore the prior art of record discloses or suggests both the first and second parameter being reported at the same time and transmitted in the same field.

Concerning the combination of references, both of the references are from the same field, i.e. communication systems and concern analogous topics. Therefore, the examiner contends that the references would be combinable to one skilled in the art.

Therefore, the argued limitations read upon the cited references or are written broad such that they read upon the cited references, as follow.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 27-29, 31-37, 39-42, and 44-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japenga et al. (US 2004/0082328) in view of Chen (US 2003/0207691), and evidenced by Monogioudis et al. (US 2002/0077140).

Regarding claim 27, Japenga discloses a method for enabling improved handover of a user equipment (Fig. 1, 150) communicating in a first radio access network utilizing a first radio access technology (RAT), said method comprising: measuring (see e.g. [0007][0028] Fig. 3 item 46), at said user equipment (Fig. 1 item 16), a first parameter for a plurality of neighboring cells of at least a second radio access network utilizing WCDMA ([0007][0028] and Fig. 3 item 46),

measuring at least a second parameter for said plurality of cells of said second network([0008][0029] and Fig. 3 item 52, measuring second parameter);

reporting said first parameter and second parameter ([0007][0028] evaluating first parameter therefore the first parameter must be reported in order to be evaluated) to a node in said first network and

initiating handover to one of said plurality of cells in said second network based on both of said first and second measured parameters ([0008][0029] camping on a new cell), and wherein both the first and the second parameter are reported and said first parameter is reported according to one of a limited range of values ([0020] parameters having minimum values therefore limited range), and said second parameter is reported using a limited value range ([0023][0024]), whereby each first parameter value is reported together with one of a plurality of possible limited value ranges for said second parameter (see e.g. [0020][0023][0024]).

Japenga discloses evaluating both first and second parameters at the same time in order to camp on a new cell, but does not explicitly disclose reporting two parameters in the same field in a measurement report message. In an analogous art, Chen teaches

Art Unit: 2617

reporting several parameters in the same field in a measurement report message (see [0004] having a field containing more than one measurement values).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to report multiple measurements in the same field in a measuring report, as taught by Japenga, thus improving the communication efficiency of the wireless communication system while keeping the current message data structure intact ([0008]).

In addition Japenga discloses reporting two parameters for handover purposes but does not specifically disclose reporting two parameters simultaneously for handover purposes. However it is well known in the art two parameters may be reported simultaneously for handover purposes, and this is evidenced by Monogioudis where Monogioudis specifically discusses reporting two parameters in the same time period ([0017]).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to transmit two parameters at the same time as taught by Monogioudis, thus rectifying the power drift problem ([0006]).

Regarding claim 37, Japenga discloses a user equipment (Fig. 1 item 16) adapted for communicating with a first radio access network utilizing a first radio access technology or a second radio access network utilizing WCDMA ([0005]-[0008]), said user equipment performing measurements of at least one cell in the second network in order to determine a suitable handover cell while communicating over said first radio access network([0005]-[0008]), said user equipment comprising:

Art Unit: 2617

means for measuring a first parameter and means for reporting said parameter to the first radio network ([0007][0028]); means for measuring a second parameter ([0008][0029]), and means for reporting both said measured first and second parameters simultaneously to a node in said first radio access network, wherein said means are configured for reporting said first parameter according to one of a limited range of values(see e.g. [0020][0023][0024]), and for reporting said second parameter using a limited value range([0020][0023][0024]), whereby each first parameter value is reported together with one of a plurality of possible limited value ranges for said second parameter(e.g. [0020][0023][0024]).

Japenga discloses evaluating both first and second parameters at the same time in order to camp on a new cell, but does not explicitly disclose reporting two parameters in the same field in a measurement report message. In an analogous art, Chen teaches reporting several parameters in the same field in a measurement report message (see [0004] having a field containing more than one measurement values).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to report multiple measurements in the same field in a measuring report, as taught by Japenga, thus improving the communication efficiency of the wireless communication system while keeping the current message data structure intact ([0008]).

Regarding claim 42, Japenga discloses a network node in a first radio access network (Fig. 1), utilizing a first radio access technology, capable of communicating with a user equipment and receiving measurements of neighboring cells of a second radio

Art Unit: 2617

access network utilizing WCDMA from the user equipment (Abstract and Fig. 1), the node comprising: means for simultaneously receiving measured first and second parameters of the second radio access network from the user equipment ([0028][0029]), wherein said receiving means are configured for receiving said first parameter according to one of a limited range of values (see e.g. [0020][0023][0024]), and for receiving said second parameter, using a limited value range (e.g. [0020][0023][0024]), whereby each first parameter value is received together with one of a plurality of possible limited value ranges for said second parameter (e.g. [0020][0023][0024]), and means for selecting a target cell of said neighboring cells of said second network for handover based on said received first and second parameters ([0031]).

Japenga discloses evaluating both first and second parameters at the same time in order to camp on a new cell, but does not explicitly disclose reporting two parameters in the same field in a measurement report message. In an analogous art, Chen teaches reporting several parameters in the same field in a measurement report message (see [0004] having a field containing more than one measurement values).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to report multiple measurements in the same field in a measuring report, as taught by Japenga, thus improving the communication efficiency of the wireless communication system while keeping the current message data structure intact ([0008]).

Regarding claims 28-29, Japenga discloses the method according to claim 27, wherein said first radio access network comprises one of GSM, WLAN and CDMA2000 (see e.g. Abstract and Fig. 1).

Regarding claims 31-32, 39, 44, Japenga discloses the method according to claim 27, wherein said first parameter comprises information regarding the quality of the received signal at the user equipment, and said first parameter representing the chip energy divided by noise, E_c/N_o ([0007][0020]).

Regarding claims 33-34, 40, 45, Japenga discloses the method according to claim 27, wherein said second parameter comprises information regarding the signal strength of the received signal at the user equipment, and said second parameter represents the Received Signal Code Power (RSCP) ([0008][0022]).

Regarding claims 35-36, Japenga discloses the method according to claim 27, further comprising initiating handover to said second network based on optimizing a predetermined function depending on said first and second parameter (see e.g. [0024][0027]).

Regarding claim 41, Japenga discloses the user equipment according to claim 37, wherein said first parameter is the E_c/N_o ([0007][0020]), and said second parameter is the RSCP ([0008][0022]).

Regarding claim 46, Japenga discloses the network node according to claim 42, wherein said received first and second parameters are the Received Signal Code Power (RSCP) ([0007][0020]) and/or the chip energy divided by noise, E_c/N_o ([0008][0022]).

Regarding claim 47, Japenga discloses the network node according to claim 42, wherein said node comprises a base station controller ([0016]).

3. Claims 30, 38 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japenga in view of Chen, further in view 3GPP Technical Specification 25.215 v.3.1.0, published in December 1999, hereafter referred to as TS.

Regarding claim 30, 38 and 43, Japenga in view of Chen discloses measuring two parameters with limited range but fails to teach the ranges that the two parameters fall under. TS teaches said first parameter ranges [-24, ..., 0] dB (section 5.1.7), and said second parameter ranges [-115, ..., -25] dBm (section 5.1.1).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to include the ranges taught in TS into parameters disclosed by Japenga in order improve efficiency of cell reselection process.

Conclusion

4. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2617

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KATHY WANG-HURST whose telephone number is (571) 270-5371. The examiner can normally be reached on Monday-Thursday, 7:30am-5pm, alternate Fridays, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KATHY WANG-HURST/
Examiner, Art Unit 2617

/NICK CORSARO/
Supervisory Patent Examiner, Art Unit 2617

Application/Control Number: 10/593,306
Art Unit: 2617

Page 11